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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,522	04/27/2006	Peter Hoghoj	7875-012	6829

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EXAMINER	
THROWER, LARRY W	
ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,522	HOGHOJ ET AL.	
	Examiner	Art Unit	
	LARRY THROWER	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) *1-7 and 19-29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 April 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 8-18 in the reply filed on April 17, 2009 is acknowledged. The traversal is on the ground(s) that the unity of invention standard is different than US restriction practice, the International Searcher and the European Examiner indicated satisfaction of the unity of invention requirements, and that the applied reference "was known to the Applicants and was submitted to the USPTO in an IDS." This is not found persuasive because of the following reasons:

2. Lack of unity of invention may be directly evident "*a priori*," that is, before considering the claims in relation to any prior art, or may only become apparent "*a posteriori*," that is, after taking the prior art into consideration. Unity of invention exists only when there is a technical relationship among the claimed inventions involving one or more special technical features. The term "special technical features" is defined as meaning those technical features that define a contribution which each of the inventions considered as a whole, makes over the prior art. The determination is made based on the contents of the claims as interpreted in light of the description and drawings. Where a search of the prior art is made, an initial determination of unity of invention, based on the assumption that the claims avoid the prior art, may be reconsidered on the basis of the results of the search of the prior art.

In this case, it is irrelevant that Applicants were aware of the applied reference or that they submitted it for consideration in an IDS. The inventions defined as Groups I-III have been reconsidered on the basis of the results of a search of the prior art, and have

not been found to relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical features for the following reason: the common technical feature in each group, as amended, is a replication master having a low surface roughness, an external surface shape which at least partially corresponds to a counterform of a surface of an object, wherein at least a part of the master is coated with a smoothening layer made of a soluble material having a flowability such that the top surface of the smoothening layer displays a smaller roughness than the surface on which it is formed. This cannot be a special technical feature under PCT Rule 13.2 because this feature was known in the prior art. Richards (US 5,855,966) discloses a replication master (10) having a low surface roughness, an external surface shape which at least partially corresponds to a counterform of a surface of an object, wherein at least a part of the master is coated with a smoothening layer made of a soluble material having a flowability such that the top surface of the smoothening layer displays a smaller roughness than the surface on which it is formed (col. 2, lines 36-45; col. 2, lines 46-55; col. 2, line 56 - col. 3, line 11; abstract).

Applicant's amendment to the claims of each group required the application of new prior art. The requirement is still deemed proper and is therefore made FINAL.

3. Claims 1-7 and 19-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim.

Drawings

4. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are informal. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 9, 12 and 18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 9 and 18 recite the limitation "said release layer." There is insufficient antecedent basis for this limitation in the claims.
- Regarding claim 12, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 8 and 12** are rejected under 35 U.S.C. 102(b) as being anticipated by Richards (US 5,855,966).

- Regarding **claim 8**, Richards discloses a replication method for producing a smooth object having a low surface roughness (abstract). The method includes producing a replication master (10) by forming the master to have a desired external surface shape which at least partially corresponds to a counterform of a surface of an object to be produced by replication (col. 2, lines 36-45), treating the external surface of the master to obtain a predetermined surface roughness value (col. 2, lines 46-55), and coating at least a part of the master with a smoothening layer made of a soluble material having a flowability such that the top surface of the smoothening layer displays a smaller roughness than the surface on which it is formed (col. 2, line 56 - col. 3, line 11); coating at least a part of the master with an object material such that the surface of the object corresponds to a counterform of the master (col. 4, lines 33-38); and releasing the object from the master (col. 4, lines 33-38).
- Regarding **claim 12**, Richards discloses the object being an optical device (col. 4, lines 33-38).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. **Claims 9-11 and 15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards (US 5,855,966), as applied to claim 8 above, in view of Hallman et al. (US 5,505,808).

- Regarding **claim 9**, Richards is silent as to dissolving the smoothening layer or a release layer with a solvent. However, Hallman et al. discloses a method of releasing an object from a master which includes dissolving a releasing layer on top of the master with a solvent (col. 5, lines 9-21). As taught by Hallman et al., dissolving a releasing layer which holds an object to a master with a solvent effectively releases the object from the master. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have dissolved the smoothening or releasing layer of Richards with a solvent because, as taught by Hallman et al., this effectively releases the object from the master (col. 5, lines 9-21).
- Regarding **claims 10-11**, Hallman et al. discloses gluing an object support to an object, which inherently fills the gaps between the two (col. 4, line 63 - col. 5, line 8).
- Regarding **claims 15-17**, Hallman et al. discloses the object and glue including epoxy (col. 7, lines 35-54).

- Regarding **claim 18**, Hallman et al. discloses coating the master with a protection layer on top of the smoothening layer (col. 7, lines 35-54).

11. **Claims 13-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Richards (US 5,855,966), as applied to claim 8 above, in view of Meeks (US 2002/0145740).

- Richards is silent as to characterizing the optical device by profilometry or reflectometry measurement. However, Meeks discloses a method of characterizing an optical device by profilometry (abstract). As taught by Meeks, characterizing a device by optical profilometry enables topographic and non-topographic defects to be detected (¶¶5 and 8). Thus, it would have been obvious to one of ordinary skill in the art the have measured the optical profile of the object produced in the method of Richards with the optical profilometer of Meeks in order to detect defects in the optical device to prevent failure of the optical device, as taught by Meeks (¶5).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LARRY THROWER whose telephone number is 571-270-5517. The examiner can normally be reached on Monday through Friday from 9:30AM-6PM est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on 571-272-1176. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Larry Thrower/
Examiner, Art Unit 1791

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791